CIAQ Meeting Minutes for June 11th 2008

CIAQ
Federal Interagency
Committee on Indoor Air Quality
[http://www.epa.gov/iaq/ciaq/index.html]

The NEXT CIAQ MEETING is Wednesday, October 15th 2008 (1:00–3:30 pm)

These minutes include: (A) final agenda; (B) Department-Agency updates; and (C) a summary of the ASHRAE 62.1 Ventilation Standard presentations.

(A) Final AGENDA

Welcome, Introductions & CIAQ News/Updates - *Tom Kelly & Phil Jalbert*
[EPA Meeting Room #152, 1310 L St., NW, Washington, DC 20005-4113]

Updates from CIAQ Member Departments & Agencies

1-NIST	National Institute for Standards & Technology, *Andy Persily*
2-HUD	Housing & Urban Development, *Peter Ashley*
3-CPSC	Consumer Product Safety Commission, *Joanna Matheson*
4-GSA	General Services Administration, *David Marcini*ak
5-EPA	Environmental Protection Agency, *Tom Kelly*

Handouts/Links (available on the CIAQ website for a limited time)
1-EPA Asthma Team Handout (.pdf)
2-Bio Fact Sheet (Persily, Stanke, Muller)(.pdf)
3-FTC Workshop on *Green Guides* (Building, Textiles) http://www.ftc.gov/opa/2008/06/greenguides.shtm
4-62 Resources RColker 18-JUN-08 (.pdf)
5-62 Intro APersily CIAQ (11JUN08)(.pdf)
6-VRP DStanke CIAQ (11JUN08)(.pdf)
7-IAQP CMuller CIAQ (11JUN08)(.ppt)

Presentations and Discussion. ASHRAE Standard 62.1 Ventilation for Acceptable Indoor Air Quality: The Ventilation Rate Procedure (VRP) and the Indoor Air Quality Procedure (IAQP). Learn the basics about each procedure, how and when they are used in commercial building design and operation, and how IAQ may be affected. The three presentations by **Andy Persily** (NIST) on the standard, **Dennis Stanke** (Trane) on the VRP, and **Chris Muller** (Purafil) on the IAQP have been posted to the CIAQ website (http://www.epa.gov/iaq/ciaq/index.html) under this meeting and agenda.

(B) Updates from CIAQ Member Departments & Agencies

1-NIST (and ASHRAE) Update

1.1-Federal R&D Priorities Report: Under the leadership of DOE and NIST, several federal agencies are developing a document called Federal R&D Priorities for Energy Efficient, Sustainable, and High Performance Buildings. This effort is being conducted under the Building Technology Subcommittee, which is part of the National Science and Technology Council's Committee on Technology. The goal of the report is to identify the research and development areas that must be pursued to achieve substantial reductions in building energy consumption and greenhouse gas (GHG) emissions and to sustain human health, habitation, and environmental resources. A workshop was held in Washington DC on May 15 and 16, which was attended by

many participants from the private sector and federal agencies. This workshop provided an opportunity for the attendees to hear about the approach being taken in the report and to provide input for consideration in subsequent drafts. Information on the effort is available at http://www.eere.energy.gov/buildings/workshop.html. (POC: Andy Persily, 301-975-6418, andyp@nist.gov)

1.2-Measurement of Ultrafine Particles Generated by Indoor Combustion and Electric Appliances: NIST is studying ultrafine particles (UFP) between 2 nm and 64 nm generated by common indoor combustion and electric appliances. Experiments are being conducted in NIST's three bedroom/two bathroom test house through the semi-continuous measurement of environmental conditions, building air change rates and particle concentrations. UFP are measured with a scanning mobility particle sizer (SMPS) equipped with a nano-differential mobility analyzer (nano-DMA). UFP sources investigated in detail include a gas stove, electric stove and electric toaster oven. Peak concentrations from the gas and electric stovetop burners/coils occur at a particle size of approximately 5 nm, and total number concentrations are high compared to outdoor levels. Since UFP have difficulty penetrating building envelopes, it appears that indoor sources such as cooking are the major contributors to human exposure. Coagulation is the dominant process affecting the evolution of the size distribution after the source is turned off. Observed number concentration changes due to coagulation have been fit by models that include corrections for van der Waals and viscosity forces and fractal shapes of the aggregated particles. Results from this work are being used to further understand building occupant exposure to UFP, as well as the fate and transport of nanoparticles in the indoor environment. (POC: Cindy Reed at 301-975-8423, chreed@nist.gov)

1.3-Effects of Portable Gasoline Powered Generator Exhaust on Indoor Carbon Monoxide Profiles: NIST is continuing a project for CPSC to examine the potential indoor levels of CO emitted by portable generators and the distribution of CO within residences when they are operated in attached garages. This effort includes measurements in a test shed and an attached garage at the NIST IAQ test house and computer simulations (using the NIST IAQ model CONTAM) of a variety of building, generator operation and ambient conditions. Testing of a "stock" generator has been completed. A CPSC contractor will modify this generator with technologies aimed at reducing CO emissions and then return it to NIST for additional testing.

ASHRAE: Standard 62.2, Environmental Health Committee and IAQ Guide

SSPC 62.2 is meeting next week (Salt Lake City) to continue work on potential addenda to the standard addressing various issues including requirements for low-rise multifamily residential buildings, credits for different ventilation system types (e.g., exhaust vs. balanced), and changes to the infiltration credit. The draft companion guideline to Standard 62.2 (Guideline 24) completed public review with minimal comments and is on the Standards Committee agenda in Salt Lake City agenda for publication approval.

The ASHRAE Environmental Health Committee is continuing work on several position documents:

- IAQ position document (revision of 2005 version): The title, purpose and scope have been approved and Steve Emmerich has been appointed chair. A committee will be appointed and begin work this summer.
- Airborne infectious diseases position document (new): The committee has completed a final draft, which will be forwarded for ASHRAE approval.
- ETS position document (revision of 2005 version): A revised document has been completed by the committee and will be forwarded for approval.

- Unvented combustion appliances (new): The committee continues to work on development of a draft document.
- Mold position document: A committee is working on a revision of the 2005 document.

For more information on these position documents or other EHC topics, the POC is Steven Emmerich; 301-975-6459, steven.emmerich@nist.gov.

ASHRAE is continuing to work on an IAQ Guide under a cooperative agreement with EPA. This effort is being pursued as a joint effort with AIA, BOMA, SMACNA and USGBC. The goal of the document is to provide guidance on best practices for achieving good IAQ in commercial and institutional buildings. A 90 % draft of the document will be available for peer review between July 25th and August 17th. Information on the effort is available at: http://www.ashrae.org/technology/page/678. (POC: Andy Persily, Project Steering Committee chair (301-975-6418, andyp@nist.gov).

2-HUD Office of Healthy Homes and Lead Hazard Control (OHHLHC) Update

2.1-Notices of Funding Availability (NOFAs): Published on May 12th in the Federal Register for Healthy Homes Technical studies ($2.1 million), Lead Technical Studies ($2.2 million), and the Healthy Homes Demonstration program ($4.4 million). Technical studies applications are due on July 7th and HH Demonstration grant applications are due on July 17th, 2008. Eligible applicants include state and local governments, Native American tribes, and private for-profit and nonprofit organizations. (POC: Peter Ashley: 202-402-7595, peter.j.ashley@hud.gov)

2.2-National Healthy Homes Conference (9/15/08-9/17/08, Baltimore, MD): HUD is working with its federal partners in planning a national healthy homes conference for September, 2008. Sessions are planned in six focus area tracks related to the implementation and advancement of the healthy homes (HH) concept., including: capacity building, mainstreaming HH principles, research, regulatory and enforcement strategies, marketing, and education. For more information, see: http://www.hud.gov/offices/lead/2008NHHC.cfm
(POC: Eric Hornbuckle: 202-402-7599, eric.w.hornbuckle@hud.gov)

2.3-Green Resources for Energy Efficient Neighborhoods Act of 2008: HUD is reviewing this draft bill which focuses on energy reduction in certain housing assisted by HUD or financed by certain lending institutions. The bill was introduced this week by Rep. Ed Perlmutter (Colorado 7th District) as H.R. 6078. It can be downloaded from the Library of Congress' Thomas website, thomas.loc.gov. The bill cites ASHRAE's energy standards (90.1 for manufactured housing and commercial buildings, and 90.2 for 1-4 unit housing) but not its corresponding indoor ventilation standards (62.1 and 62.2). Indoor environmental quality is mentioned in certain lending criteria. HUD has not completed its analysis of the bill.
(POC: Dr. Warren Friedman; warren.friedman@hud.gov)

2.4-IAQ Studies of "Green Construction": The OHHLHC is supporting two pilot studies of indoor environmental quality, including IAQ. One is being conducted in federally assisted senior housing in Atlanta and is supported through an interagency agreement with the CDC. The other study, to be conducted by the OHHLHC and HUD's Office of Policy Development and Research, will be in federally assisted multifamily housing that has undergone significant "green rehab" work, that includes the. (POC: Peter Ashley; 202-402-7595, peter.j.ashley@hud.gov)

3-CPSC/Consumer Product Safety Commission. CPSC's work is ongoing for the carbon

monoxide (CO) generator and ozone-generating air cleaner projects. On the strong sensitizer project, the staff report on the external review has been prepared and reviewed by senior staff. An impact analysis is being prepared based upon the proposed Globally Harmonized System (GHS) potency cut-offs. (POC: Joanna M. Matheson; 301-504-7043; jmatheson@cpsc.gov)

4-GSA/General Services Administration - Indoor Air Quality (IAQ) Building Evaluations

The General Services Administration (GSA) has initiated an effort to conduct standardized comprehensive indoor air quality (IAQ) evaluations of our building portfolio. Historically, IAQ evaluations consisted of "spot" surveys or were performed to address specific complaints. The purpose of this project is to obtain comprehensive, full building baseline assessments - to essentially "commission" our buildings for IAQ. The basic components of the IAQ evaluations consist of:

a. Evaluations of building envelope and HVAC condition, performance, and maintenance practices,

b. Analysis of temporally and spatially distributed environmental samples. Data is collected from spot measurements, continuous sampling (data logging) and seasonal re-sampling. Data is obtained from representative locations throughout each building to ensure a "whole building" evaluation of conditions, and

c. Web-administered "near real-time" occupant satisfaction surveys (next phase). It is GSA's intent to perform follow-up sampling whenever occupancy or building systems change significantly. We have completed evaluations of two large federal buildings to date with additional evaluations underway. GSA welcomes interested parties to comment on our approach, sampling protocol and survey questions - agency partnerships are also welcomed. A detailed scope will be furnished upon request. The results of these evaluations will help ensure GSA continues to provide sustainable, healthy, high-performing facilities to our tenants and the public. (POC: David Marciniak, david.marciniak@gsa.gov, 202-538-9029)

5-EPA Indoor Environments Division (IED) Update

5.1-Radon

5.1.1-EPA Inspector General Report on EPA's Radon Program Released. On June 3, 2008, the EPA Office of Inspector General (OIG) released their evaluation of the Agency's Radon Program. The report, *More Action Needed to Protect Public from Indoor Radon Risk*, offers several suggested improvements to achieving the statutory goal to reduce public exposure to radon, including a recommendation to develop a new strategy that considers using Section 310 of the Indoor Radon Abatement Act (IRAA). The full report is available at http://www.epa.gov/oig/reports/2008/20080603-08-P-0174.pdf.

5.1.2-EPA Inspector General Evaluation of Radon Test Device Accuracy. Indoor Environments Division (IED) staff is working with the Office of the Inspector General (OIG) on their evaluation of the accuracy and reliability of indoor radon test devices. The OIG will soon begin the preliminary research phase to determine whether radon testing provides accurate data on indoor radon risks. The OIG will also be looking at the Agency's role in ensuring that test kits and laboratory analyses provide accurate and reliable results.

5.1.3-Radon Leaders Saving Lives Campaign. IED is continuing to work jointly with CRCPD and AARST to ramp up action on radon in the U.S. This acceleration is needed to keep pace with

the growing number of homes with levels of radon above EPA's action level. EPA, CRCPD, and AARST are currently jointly developing a Radon Web Portal through which consumers, states, industry, public health groups and others can use to find and share information about radon. (POC: Bill Long, 202-343-9733, long.bill@epa.gov)

5.2-Schools. Annual *Indoor Air Quality Tools for Schools* National Symposium. The 9th *IAQ Tools for Schools* National Symposium will be held in Washington, DC, December 4-6, 2008. Over 500 participants representing school districts from across the nation are expected to attend. This event offers peer-to-peer networking and learning opportunities on the importance of IAQ in schools, and simple, low-cost measures to implement proactive comprehensive IAQ management plans. This event will also honor school districts for their achievements and innovative approaches in integrating and institutionalizing IAQ into their curricula. Anyone working with school districts should encourage them to attend this event. Registration opens at the end of June 2008; space is limited. Register on-line at www.iaqsymposium.com. The Symposium will be held at the Grand Hyatt Hotel (Metro Center), 1000 H Street, NW, Washington, DC 20001. (POC: Jennifer Lemon, 202-343-9608, lemon.jennifer@epa.gov)

5.3-Asthma. National Asthma Forum. IED hosted 260 participants at this year's 3rd annual Forum. The day and a half gathering was a successful networking and information sharing event. IED also held a pre-Forum workshop with about 25 participants on developing a business case for asthma management. The aim of this continuing work is to produce financial models/tools that asthma programs can use in capturing the value of their program services as part of their sustainability and funding efforts. We especially appreciate the participation of our Federal and non-profit partners, at the workshop and in the Forum, and their continued support for the Communities in Action for Asthma Friendly Environments initiative. In particular, we appreciate the reference to Communities in Action in HUD's recent super NOFA, and look forward to hearing about this year's grantees. (POC: Alisa Smith, 202-343-9372, smith.alisa@epa.gov)

5.4-Science.

5.4.1-IAQ Scientific Findings Resource Bank Web Site. IED is pleased to announce a new web-based resource, the IAQ Scientific Findings Resource Bank (http://eetd.lbl.gov/ied/sfrb). The Bank was developed through an interagency-agreement with the Department of Energy's Lawrence Berkeley National Lab (LBNL). The Bank is a resource for building professionals, public health professionals, and others seeking scientific information about how IAQ can affect people's health or work performance. The Bank provides information summarizing the state of scientific knowledge about the relationships between health and productivity for IAQ conditions or associated building characteristics.

The website is in a "drill-down" format that starts out with high level summary statements and then offers links to additional details and resources. The website will be updated as additional analyses are conducted and new information becomes available. Currently several key resources are available, e.g., detailed sections on "Health and Economic Impacts of Building Ventilation" and "Impacts of Indoor Environments on Human Performance and Productivity." Also available are introductory sections on "Indoor Dampness, Mold and Health" and "Indoor VOCs and Health," which will likely be developed into more detailed sections in the future. Organizations are encouraged to link to the new IAQ Scientific Findings Resource Bank Web site. (POC: Gregory Brunner, 202-343-9052, Brunner.Gregory@epa.gov)

5.4.2-TSCA Section 21 Workgroup on Formaldehyde. Laureen Burton represented EPA's Office of Air and Radiation (OAR) on an EPA-wide Toxic Substances Control Act (TSCA) workgroup.

The workgroup was formed to address a March 24th petition submitted to EPA by over 20 environmental organizations. The petition asked EPA to adopt California's new standard on formaldehyde in certain wood products. The workgroup published a Federal Register (FR) notice on April 25th (73 FR 22369) soliciting public comment on the petition. The Agency's decision to the petitioners is scheduled to be published in the FR on later than June 21st.
(POC: Laureen Burton, 202-343-9032, burton.laureen@epa.gov)

5.4.3-Air Cleaners and Ozone Generators. On May 7, 2008, IED's Scientific and Analysis Team (SAT) convened a meeting to review the available data on ozone and air cleaners. Attendees included ozone criteria document scientists from EPA's Office of Air Quality Planning and Standards (OAQPS) and CPSC staff. Participants discussed the adequacy of the current 50ppb ozone exposure limit (for homes) used by manufacturers of ozone generators and air cleaners. Discussion centered on the potential health and safety concerns associated with continuous exposures, especially for susceptible populations, i.e., children, asthmatics and the elderly.
(POC: Laureen Burton, 202-343-9032, burton.laureen@epa.gov and Treye Thomas, 301-504-7738, tthomas@cpsc.gov)

6-EPA Green Building Research. National Risk Management Research Laboratory (NEMRL).
(POC: Bob Thompson; 919-541-1904, Thompson.Bob@epa.gov)

(C) Presentations. Three presentations on ASHRAE Standard 62.1 Ventilation for Acceptable Indoor Air Quality were made: (1) an overview by **Andy Persily** (NIST) on the standard; (2) by **Dennis Stanke** (Trane) on the Ventilation Rate Procedure (VRP); and (3) by **Chris Muller** (Purafil) on the Indoor Air Quality Procedure (IAQP). During the course of the discussion, Alexandra Sullivan (Sullivan.alexandra@epa.gov) of EPA's Office of Atmospheric Programs (OAP)/Climate Protection, gave a brief description of the Energy Star program and noted that one of the most commonly asked questions concerned the IAQP and its application. Subsequent to the meeting, Ryan Colker (ASHRAE) provided a list of resources on using ASHRAE 62.1; see attachment "62 Resources RColker 18-JUN-08" on the CIAQ website. These presentations will remain available on the CIAQ website for two weeks; after that please contact the presenter.

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